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| **Module** | **Lessons** | Vocab and Tools | Standards |
| Statistics (Module 6)  Statistics (Module 6) | 1: Posing Statistical Questions  2: Displaying a Data Distribution  4: Creating a Histogram  6: Describing the Center of a Distribution using the Mean  7: The Mean as a Balance Point  8: Variability in a Data Distribution  9: The Mean Absolute Deviation (MAD)  10: Describing Distributions Using the Mean and MAD  11: Describing Distributions Using the Mean and MAD  12: Describing the Center of a Distribution Using the Median  13: Describing Variability using the Interquartile Range (IQR)  14: Summarizing a Distribution using a Box Plot  15: More Practice with Box Plots  16: Understanding Box Plots  18: Connecting Graphical Representations and Numerical Summaries  19: Comparing Data Distributions  20: Describing Center, Variability, and Shape of a Data Distribution from a Graphic Representation  21: Summarizing a Data Distribution by Describing Center, Variability and Shape  **Optional Project**  **Assessment** | New or Recently Introduced Terms  **Statistical Question** (A question that anticipates variability in the data that would be collected in order to answer the question.)  **Median** (A measure of center appropriate for skewed data distributions. It is the middle value when the data are ordered from smallest to largest if there are an odd number of observations and half way between the middle two observations if the number of observations is even.)  **Mean** (A measure of center appropriate for data distributions that are approximately symmetric. It is the average of the values in the data set. Two common interpretations of the mean are as a “fair share” and as the balance point of the data distribution.)  **Dot Plot** (A plot of numerical data along a number line.)  **Histogram** (A graphical representation of a numerical data set that has been grouped into intervals. Each interval is represented by a bar drawn above that interval that has a height corresponding to the number of observations in that interval.)  **Box Plot** (A graph of five numerical summary measures: the minimum, lower quartile, median, upper quartile, and the maximum. It conveys information about center and variability in a data set.)  **Variability** (Variability in a data set occurs when the observations in the data set are not all the same.)  **Deviations from the Mean** (The differences calculated by subtracting the mean from the observations in a data set.)  **Mean Absolute Deviation (MAD)** (A measure of variability appropriate for data distributions that are approximately symmetric. It is the average of the absolute value of the deviations from the mean.)  **Interquartile Range (IQR)** (A measure of variability appropriate for data distributions that are skewed. It is the difference between the upper quartile and the lower quartile of a data set and describes how spread out the middle 50% of the data are.)  Familiar Terms and Symbols[[1]](#footnote-1)  Line Plot or Dot Plot  **Suggested Tools and Representations**  Dot Plots  Histograms  Box Plots | 6.SP.A.1 - Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. *For example, “How old am I?” is not a statistical question, but “How old are the students in my school?” is a statistical question because one anticipates variability in students’ ages.*  6.SP.A.2 - Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape  6.SP.A.3 - Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.  6.SP.B.4 - Display numerical data in plots on a number line, including dot plots, histograms, and box plots.  6.SP.B.5 - Summarize numerical data sets in relation to their context, such as by:   * 1. Reporting the number of observations.   2. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.   3. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.   4. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered. |

1. [↑](#footnote-ref-1)